Creating a community for our young at heart

**ANGLICARE PONDS | DUDLEY FOORD HOUSE**

**JHA SERVICES** | ELECTRICAL, MECHANICAL, LIGHTING, HYDRAULICS, FIRE, AUDIO VISUAL ESD, LEVEL 3

**CLIENT** | ANGLICARE (Formerly Anglican Retirement Villages)

**LOCATION** | THE PONDS, NSW

**VALUE** | $21.5M

**DUDLEY FOORD HOUSE, THE PONDS**

More like a village than an Aged Care facility, Anglicare Ponds provides residential care rooms. With its central hub ‘streetscape’ consisting of a library, health spa, hairdresser and café its designed to create a central meeting point for a thriving community.

Surrounded by green parklands, Anglicare Ponds offers a tranquil setting for a wonderful retirement lifestyle.
A SAFE PLACE FOR OUR ELDERLY

Safety and security is paramount for aged care facilities. All residents and loved ones must know and feel that the premise is well protected, with due regard for ease of access throughout the facilities. Systems relying on the memory, keen eyesight or fine physical movement or accuracy of residents are not used. The implementation of electronic security systems for the premise provides the required security measures to control the main points of access and monitoring of selected areas.

CCTV coverage is also provided to the main entry points but limited within the internal residential areas being mindful of the residents’ right to privacy and to promote a comfortable homely atmosphere for the residents.

Safety of the premises is also accentuated with security and external circulation lighting to ensure good illumination around the building footprint and along the main areas of the landscape.

LIGHTING DESIGN

The lighting design and particularly the elimination of facial shadowing and glare, promotes a sense of security and familiarity in the residents and also provides way-finding lighting to the landscape beacons. Due to the higher number of scattering sources within the cornea of aged residents, room lighting that appears crisp to a younger person will generally appear foggy to an older person. As such the elderly can easily find themselves living in a perpetually blurry haze. Therefore the lighting design in this facility places great weight on the reduction of glare and points of high lighting intensity as a design principle.
A HOLISTIC APPROACH

The Anglicare Ponds building demonstrates an holistic approach to efficient and innovative building services systems. This was possible by adopting a collaborative methodology with Anglicare and the project team from the initial concepts, through detail design and construction phase.

A systematic approach to the hot water plant has resulted in a cost effective, low loss and low maintenance hot water system throughout the site. Dedicated hot and warm water plants avoid taking hot and warm water to parts of the building where they are not needed. Warm water circulates throughout the complex to each individual room to meet requirements for patient care facilities. A separate hot water circuit provides hot water to non-patient areas such as kitchens and laundry areas. The separation of the systems allows for the deletion of Thermostatic Mixing Valves on the warm water supplies to each room. This eliminates the associated maintenance and ongoing testing costs necessary to continuously prove facility compliance with relevant codes.
GREEN INITIATIVES

Recycled Water
Local sustainable recycled water usage initiative have also been implemented for the building. Toilet flushing water is provided from the site recycled water system which was made available from the Rouse Hill community recycled water scheme. The implementation of this scheme will provide substantial operation cost savings due to the reduced supply cost as well as reducing the impact of this facility on the potable water mains within the area.

Section J Glazing
The glazing solution implemented for the building is a combination of high thermal performance low e-glazing and double glazing. Higher levels of insulation, significantly beyond the minimum legislated requirements, have been provided in the roofs and external walls to minimise unwanted conduction heat losses or gains and to provide a higher level of thermal comfort.

Efficient and Intelligent Lighting
The artificial lighting installation for the premise has been carefully coordinated with due regard to energy savings, cost efficiency aesthetics and visual comfort. The use of highly efficient LED technology and intelligent lighting control strategies (embracing the use of time scheduling, light levels controls and passive infrared motion sensors) assist with reducing lighting running costs. The aesthetics and performance of the light fittings were carefully coordinated to ensure visual comfort to the residents of RACF.

This is particularly the case in the residential wings where a combination of decorative pendants, corridor wall washing lights and welcoming beacon lighting for the residential rooms were implemented – the latter through the use of localised room entry lighting. Focused lighting and highly attractive Streetscape lighting are combined with the use of directional downlights within curved architectural roof sections. Localised architectural pendants are used to enhance the welcoming effect of the streetscape areas.

Photovoltaic Solar System
A 100 Kilowatt solar photovoltaic system has been installed at the facility. The system has been selected as green initiative for the facility; generating solar electricity via the photovoltaic cells installed on the roof. The solar energy generated offsets electricity consumption for the building and injects any surplus on-site generated electricity back onto the local electrical grid for use by others. Available roof space in the optimal orientation was utilised to its maximum potential to accommodate the photovoltaic system of the given size.

This was possible due to the form of the building – using various north facing rake roof sections – and took advantage of the low height planning zones of the precinct which minimised obstructions and shadowing of the PV array. It also reduces dirt build-up on the panels, all combining to ensure the maximum efficiency of electricity generation of the installed system.
FUTURE-PROOFED TECHNOLOGY

Communications and audio-visual technology are advancing at unprecedented rates. As such it was imperative that the facility be provided with the latest technology to give the best resident experience and to future-proofing the site as far as practicable. One of the main ways that the site was future proofed was the provision of a distributed fibre communications network facility (GPON – Gigabit Passive Optical Network) throughout. The massive bandwidth capabilities of fibre in comparison to copper is well known therefore the site will never need to strip out connections to provide greater bandwidth. The GPON network allows convergence of many communications sub-systems – allowing them to reside on a single physical platform and distributing information through the fibre network.

The sub-systems residing on the converged GPON network includes the facility’s ICT network, WIFI network, nurse call system, MATV, electronic security and CCTV systems. This convergence significantly saves on building materials and physical space occupied when compared to conventional standalone sub-systems installed side-by-side over the same routes. The GPON’s vast bandwidth allows for interfacing to other sub-systems in future should this be required; such as implementing high speed IP-TV networks, on-demand and pay-per-view movies, inter-resident gaming etc.